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Docket No. 0575/63711-A/JPW/GJG/AX

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Virginia W. Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
For : COVALENT CHEMICAL INDUCERS OF PROTEIN
DIMERIZATION AND THEIR USES IN HIGH
THROUGHPUT BINDING SCREENS

1185 Avenue of the Americas
New York, New York 10036
May 3, 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. § 1.56, applicant would like to direct the Examiner's attention to the following disclosures, which are listed on Form PTO-1449 (Exhibit A). Copies of the disclosures listed below as items 1-39 are attached hereto as Exhibits 1-42, respectively:

1. U.S. Patent No. 5,928,868 (Liu et al.) issued July 27, 1999
Exhibit 1;
2. U.S. Patent No. 5,736,843 (Landry) issued April 7, 1998
Exhibit 2;
3. U.S. Patent No. 5,468,614 (Fields et al.) issued November 21, 1995 **Exhibit 3;**

Virginia W. Cornish
U.S. Serial No.: 10 056,874
Filed: January 24, 2002
Page 2

4. U.S. Patent No. 5,314,817 (Schultz, P.) issued May 24, 1994

Exhibit 4);

5. U.S. Patent No. 5,194,594 (Kwawli et al.) issued March 16, 1993 (**Exhibit 5);**

6. PCT International Application Publication No. WO 01/53355 (Cornish et al.) published July 26, 2001 (**Exhibit 6);**

7. PCT International Application Publication No. WO 99/10510 (Natesan et al.) published March 4, 1999 (**Exhibit 7);**

8. PCT International Application Publication No. WO 99/10508 (Natesan et al.) published March 4, 1999 (**Exhibit 8);**

9. PCT International Application Publication No. WO 98/13353 (Whitney et al.) published April 2, 1998 (**Exhibit 9);**

10. PCT International Application Publication No. WO 97/31113 (Rickles et al.) published August 28, 1997 (**Exhibit 10);**

11. PCT International Application Publication No. WO 96/30540 (Tsien et al.) published October 3, 1996 (**Exhibit 11);**

12. European Patent Application Publication No. EP 0 742 015 (Kidow et al.), published November 13, 1996 (**Exhibit 12);**

13. Austin DJ, et al. Proximity versus allosteric: the role of regulated protein dimerization in biology. 1994. Chem Biol.

Virginia W. Cornish
U.S. Serial No.: 10/056,874
Filed: January 24, 2002
Page 3

- 150 : 131-6 (**Exhibit 13**) ;
14. Belshaw PJ, et al. Controlling protein association and subcellular localization with a synthetic ligand that induces heterodimerization of proteins. 1996. Proc. Natl Acad Sci USA 93(10):4604-7. (**Exhibit 14**) ;
15. Belshaw PJ, et al. Controlling programmed cell death with a cyclophilin-cyclosporin-based chemical inducer of dimerization. 1996. Chem. Biol. 3:731-738 (**Exhibit 15**) ;
16. Choi J; et al. Structure of the FKBP-12-Rapamycin complex interacting with the binding domain of human FRAF. 1996. Science 273(5272):239-42 (**Exhibit 16**) ;
17. DeGrado WF, et al. Screening, selection and design: standing at the crossroads in three dimensions. 1997. Current Opinion in Structural Biology 7:455-456 (**Exhibit 17**) ;
18. Diver SR, et al. Single-step synthesis of cell-permeable protein dimerizers that activate signal transduction and gene expression. 1997. J. Am. Chem. Soc. 119, 5105-5109 (**Exhibit 18**) ;
19. Ho SN, et al. Dimeric ligands define a role for transcriptional activation domains in reinitiation. 1996. Nature. 382(6594):822-6 (**Exhibit 19**) ;

Virginia W. Cornish
U.S. Serial No.: 10/056,874
Filed: January 24, 2002
Page 4

21. Holsinger LJ, et al. Signal transduction in T lymphocytes using a conditional allele of Sos. 1995. Proc. Natl. Acad. Sci. USA 92:9810-9814 (**Exhibit 20**);
22. Hung DT, et al. Understanding and controlling the cell cycle with natural products. 1996. Chem. Biol. 3:623-639 (**Exhibit 21**);
23. Klämm JD, et al. Dimerization as a regulatory mechanism in signal transduction. 1998. Annu. Rev. Immunol. 16:569-92 (**Exhibit 22**);
24. Liberles SD, et al. Inducible gene expression and protein translocation using nontoxic ligands identified by a mammalian three-hybrid screen. 1997. Proc. Natl. Acad. Sci. USA 94(15):7825-7830 (**Exhibit 23**);
25. Licitra EJ, et al. A three-hybrid system for detecting small ligand-protein receptor interactions. 1996. Proc. Natl. Acad. Sci. USA 93:12817-12821 (**Exhibit 24**);
26. Pedersen E, et al. A method for directed evolution and functional cloning of enzymes. 1998. Proc. Natl. Acad. Sci. USA 95:10523-10528 (**Exhibit 25**);
27. Prusky MN, et al. Mechanistic studies of a signaling pathway activated by the organic dimerizer FK1012. 1994. Chem. Biol. 1:163-172 (**Exhibit 26**);

Virginia W. Cornish
U.S. Serial No.: 10/056,874
Filed: January 24, 2002
Page 5

27. Schreiber SL. Chemical genetics resulting from a passion for synthetic organic chemistry. 1998. *Bioorganic & Medicinal Chemistry* 6:1127-1152 (**Exhibit 27**);
28. Spencer DM, et al. Controlling signal transduction with synthetic ligands. 1993. *Science* 262(5136):1019-1024 (**Exhibit 28**);
29. Spencer DM, et al. Functional analysis of Fas signaling in vivo using synthetic inducers of dimerization. 1996. *Curr Biol.* 6(7):839-47 (**Exhibit 29**);
30. Spencer DM, et al. A general strategy for producing conditional alleles of Src-like tyrosine kinases. 1995. *Proc. Natl. Acad. Sci.* 92:9805-9809 (**Exhibit 30**);
31. Stockwell BR, et al. TGF-beta-signaling with small molecule FKBP12 antagonists that bind myristoylated FKBP12-TGF-beta type 1 receptor fusion proteins. 1998. *Chem Biol.* 5(7):385-95 (**Exhibit 31**);
32. Stockwell BR, et al. Probing the role of homomeric and heteromeric receptor interactions in TGF-beta signaling using small molecule dimerizers. 1998. *Curr Biol* 8(13):761-766 (**Exhibit 32**);
33. Winkler T, et al. Confocal fluorescence coincidence analysis: An approach to ultra high-throughput screening. 1996. *Proc. Natl. Acad. Sci. USA* 93:1375-1378 (**Exhibit 33**);

Virginia W. Cornish
U.S. Serial No.: 10/056,874
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Page 6

34. Yang J., et al. Small-molecule control of insulin and PDGF receptor signaling and the role of membrane attachment. 1997. Curr. Biol. 8:11-18 (**Exhibit 34**);
35. Zlokarnik G., et al. Quatitation of transcription and clonal selection of single living cells with beta-lactamase as reporter. 1998. Science 279(5347):84-8 (**Exhibit 35**);
36. Search Report dated May 14, 2001 corresponding PCT International Application No. PCT/US01/02285 (**Exhibit 36**);
37. Lin, H., et al. Dexamethasone-Methotrexate: An Efficient Chemical Inducer of Protein Dimerization In Vivo. 2000. J.Am.Chem.Soc. 122:4247-4248 (**Exhibit 37**);
38. Kopytek, S.J., et al. Chemically Induced Dimerization of Dihydrofolate Reductase by a Homobifunctional Dimer of Methotrexate. 2000. Chem Biol. 7:313-321 (**Exhibit 38**);
39. U.S. Serial No. 09/768,479, filed January 24, 2001 (**Exhibit 39**);
40. Firestone, S.M., et al. Using an AraC-Based three-hybrid system to detect biocatalysts in vivo. 2000. Nature Biotechnology. 18, 544-547 (**Exhibit 40**);
41. Pelletier, J.N., et al. Oligomerization domain-directed reassembly of active dihydrofolate reductase from rationally designed fragments. 1998.

Virginia W Cornish
U.S. Serial No.: 10/056,874
Filed: January 24, 2002
Page 7

Proc.Natl.Acad.Sci.USA. 95, 12141-12146 (**Exhibit 41**); and

42. Ladart, D., Karimova, G. Genetic systems for analyzing protein-protein interactions in bacteria. 2000. Res. Microbiol. 151, 711-720 (**Exhibit 42**).

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone at the number provided below.

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. If any such fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

John P. White
Reg. No. 28,678
Gary J. Gershik
Reg. No. 39,992

John P. White
Registration No. 28,678
Gary J. Gershik
Registration No. 39,992
Attorney for Applicant
Cooper & Dunham LLP
1185 Avenue of the Americas
New York, New York 10036
(212) 278-0400

Form PTO-1449

U.S. Department of Commerce
Patent and Trademark Office

Atty. Docket No. 63711-A JPW/GJG	Serial No. 10/056,874
Applicant Virginia W. Comish	
Filing Date January 24, 2002	Group 1614



INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number								Date	Name	Class	Subclass	Filing Date if Appropriate
J	5	9	2	8	8	6	8	Jul 27, 1999	Liu et al.				
J	5	7	3	6	3	4	3	April 7, 1998	Landry				
J	5	4	6	8	6	1	4	Nov. 21, 1995	Fields et al.				
J	5	3	1	4	8	1	7	May 24, 1994	Schultz, P.				
J	5	1	9	4	5	9	4	March 16, 1993	Kwawli et al.				

	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
J	0 1 5 3 3 5 5	Jul 26, 2001	WO				
J	9 9 1 0 5 1 0	March 4, 1999	WO				
J	9 9 1 0 5 0 8	March 4, 1999	WO				
J	9 8 1 3 3 5 3	April 2, 1998	WO				
J	9 7 3 1 1 1 3	August 28, 1997	WO				
J	9 6 3 0 5 4 0	October 3, 1999	WO				
J	0 7 4 2 0 1 5	November 13, 1996	EP				

Austin DJ, et al. Proximity versus allostery: the role of regulated protein dimerization in biology. 1994. Chem Biol. 1(3): 131-6 (Exhibit 13)

Belshaw PJ, et al. Controlling protein association and subcellular localization with a synthetic ligand that induces heterodimerization of proteins. 1996. Proc. Natl Acad Sci USA 93(10):4604-7 (Exhibit 14)

EXAMINER	DATE CONSIDERED
	5/10/06

*EXAMINER: initial in reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant: Virginia W. Comish
U.S. Serial No.: 10/056,874
Filed: January 24, 2002
Group Art Unit: 1614
Exhibit A



Form PTO-149 6-97 U.S. Patent & Trademark Office	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 63711-A JPW/GJG	Serial No. 10 056,874
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Virginia W. Cornish	Filing Date January 24, 2002
		Group 1614	

INFORMATION DISCLOSURE STATEMENT
(Use several sheets if necessary)

FOREIGN PATENT DOCUMENTS

JF Belshaw PJ, et al. Controlling programmed cell death with a cyclophilin-cyclosporin-based chemical inducer of dimerization. 1996. Chem. Biol. 3:731-738 (Exhibit 15)

	Choi J, et al. Structure of the FKBP-12-Rapamycin complex interacting with the binding domain of human FRAP. 1996. Science 273(5272):239-42 (Exhibit 16)
	DeGrado WF, et al. Screening, selection and design: standing at the crossroads in three dimensions. 1997. Current Opinion in Structural Biology 7:455-456 (Exhibit 17)
	Diver SR, et al. Single-step synthesis of cell-permeable protein dimerizers that activate signal transduction and gene expression. 1997. J. Am. Chem. Soc. 119: 5106-5109 (Exhibit 18)

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U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. 63711-A JPW/GJG	Serial No. 10,056,874
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Virginia W. Cornish	
		Filing Date January 24, 2002	Group 1614

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

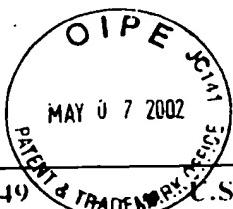
	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Ho SN, et al. Dimeric ligands define a role for transcriptional activation domains in reinitiation. 1996. Nature. 382(6594):822-6 (Exhibit 19)
	Holsinger LJ, et al. Signal transduction in T lymphocytes using a conditional allele of Sos. 1995. Proc. Natl. Acad. Sci. USA 92:9810-9814 (Exhibit 20)
	Hung DT, et al. Understanding and controlling the cell cycle with natural products. 1996. Chem. Biol. 3:623-639 (Exhibit 21)

EXAMINER **DATE CONSIDERED** **3/11/06**

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Page 4 of 8

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Patent and Trademark Office

INFORMATION DISCLOSURE STATEMENT
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Atty. Docket No.	Serial No.
63711-A JPW/GJG	10 056,874
Applicant	Virginia W. Cornish
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January 24, 2002	1614

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

FOREIGN PATENT DOCUMENTS

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.).

B

Klemm JD, et al. Dimerization as a regulatory mechanism in signal transduction. 1998. Annu. Rev. Immunol. 16:569-92 (Exhibit 22)

J

Liberles SD, et al. Inducible gene expression and protein translocation using nontoxic ligands identified by a mammalian three-hybrid screen. 1997. Proc. Natl. Acad. Sci. USA 94(15):7825-7830 (Exhibit 23)

J

Licitra EJ, et al. A three-hybrid system for detecting small ligand-protein receptor interactions. 1996. Proc. Natl. Acad. Sci. USA 93:12817-12821 (Exhibit 24)

EXAMINER **DATE CONSIDERED** **S/11/06**

•EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this from with next communication to applicant.



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Form PTO-1449

**U.S. Department of Commerce
Patent and Trademark Office**

**INFORMATION DISCLOSURE STATEMENT
(Use several sheets if necessary)**

Atty. Docket No.	Serial No.
63711-A JPW GJG	10-056,874

Applicant
Virginia W. Cornish

Filing Date	Group
January 24, 2002	1614

U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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						Yes	No

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	Search Report dated May 14, 2001 corresponding PCT International Application No. PCT/US01/02285 (Exhibit 36)

EXAMINER *[Signature]* DATE CONSIDERED *5/19/06*

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Page 8 of 8

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. 63711-A JPW/GJG	Serial No. 10/056,874		
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				Applicant Virginia W. Cornish			
		Filing Date January 24, 2002	Group 1614				
U.S. PATENT DOCUMENTS							
Examiner Initial	Document Number	Date	Name	Class	Subclass		
					Filing Date if Appropriate		
FOREIGN PATENT DOCUMENTS							
	Document Number	Date	Country	Class	Subclass	Translation	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>S6</i>	Lin, H., et al. Dexamethasone-Methotrexate: An Efficient Chemical Inducer of Protein Dimerization <i>In Vivo</i> . 2000. J.Am.Chem.Soc. 122:4247-4248 (Exhibit 37)						
<i>C</i>	Kopytek, S.J., et al. Chemically Induced Dimerization of Dihydrofolate Reductase by a Homobifunctional Dimer of Methotrexate. 2000. Chem Biol 7:313-321 (Exhibit 38)						
	U.S. Serial No. 09/768,479, filed January 24, 2001 (Exhibit 39)						
	Firestone, S.M., et al. Using an AraC-Based three-hybrid system to detect biocatalysts <i>in vivo</i> . 2000. Nature Biotechnology. 18, 544-547 (Exhibit 40)						
	Pelletier, J.N., et al. Oligomerization domain-directed reassembly of active dihydrofolate reductase from rationally designed fragments. 1998. Proc.Natl.Acad.Sci.USA. 95:12141-12146 (Exhibit 41)						
<i>C</i>	Ladant, D., Karimova, G. Genetic systems for analyzing protein-protein interactions in bacteria. 2000. Res. Microbiol. 151, 711-720 (Exhibit 42)						
EXAMINER	DATE CONSIDERED					<i>5/14/06</i>	
<p>*EXAMINER: Initial if reference considered, whether or not citation is in accordance with MPEP 609: Draw line through citation if not in accordance and not considered. Include copy of this form with next communication to applicant.</p>							



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Virginia W. Cornish

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Serial No. : 10/056,874

AUG 23 2002

Filed : January 24, 2002

TECH CENTER 1600/2900

For : Covalent Chemical Inducers of Protein
Dimerization And Their Uses in High
Throughput Binding Screens

1185 Avenue of the Americas
New York, New York 10036
August 13, 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

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SIR:

AUG 22 2002

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT Technology Center 2600

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicant direct the Examiner's attention to document listed below and on Form PTO-1449 attached hereto as **Exhibit A**. Copies of references 1-4 are attached hereto as **Exhibits 1-4**.

This Information Disclosure Statement is being submitted pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Thus, this Information Disclosure Statement should be entered and considered.

Thus, applicant request that this Information Disclosure Statement be considered.

1. U.S. Patent No. 6,200,759, issued March 13, 2001 to Dove, S., et al. (**Exhibit 1**);

Virginia W. Cornish
Serial No.: 09/768,479
Filed: January 24, 2001
Page: 2

2. U.S. Patent No. 5,925,523, issued July 20, 1999 to Dove, S., et al. (**Exhibit 2**);
3. U.S. Serial No. 10/084,388, filed February 25, 2002 (**Exhibit 3**); and
4. U.S. Serial No. 10/132,039, filed April 24, 2002 (**Exhibit 4**).

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicant's undersigned attorney invites the Examiner to telephone at the number provided below.

No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted

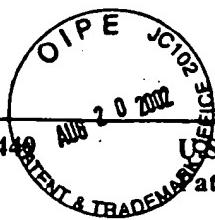
Gary J. Gershik

John P. White
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Gary J. Gershik
Registration No. 39,992
Attorney for Applicant
Cooper & Dunham LLP
1185 Avenue of the Americas
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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

Gary J. Gershik

John P. White	Date
Reg. No. 28,678	
Gary J. Gershik	
Reg. No. 39, 992	



Sheet 1 of 1

***EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609:
Draw line through citation if not in conformance and not considered. Include copy of this form with next
communication to applicant.



(JPW)

Docket No. 63711-A/JPW/GJG/DNS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Virginia W. Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
For : COVALENT CHEMICAL INDUCERS OF PROTEIN DIMERIZATION AND THEIR USES IN HIGH THROUGHPUT BINDING SCREENS

1185 Avenue of the Americas
New York, New York 10036
April 18, 2006

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

FIFTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicant directs the Examiner's attention to the references which are listed on the attached Form PTO-1449 (**Exhibit A**) and are also listed below.

Applicant filed an Information Disclosure Statement including a Form PTO-1449 on May 3, 2002 and a Supplemental Information Disclosure Statement on November 2, 2004. These Information Disclosure Statements disclosed, among other items, U.S. Serial No. 09/768,479, filed January 24, 2001; U.S. Serial No. 10/084,388, filed January 25, 2002; and U.S. Serial No. 10/132,039, filed April 24, 2002, (collectively, the "Disclosed Applications"). Since the filing of these Information Disclosure Statements, the Disclosed Applications have published as U.S.

Applicant : Virginia Cornish
Serial No.: 10/705,644
Filed: November 10, 2003
Page 2

Patent Application Publications. Accordingly, applicant submits this Fifth Supplemental Information Disclosure Statement to have the published Disclosed Applications made of record in the subject application.

This Fifth Supplemental Information Disclosure Statement is being submitted pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Thus, this Fifth Supplemental Information Disclosure Statement should be entered and considered.

1. U.S. Patent Application Publication No. 2002-0004202 A1, published January 10, 2002, corresponding to Virginia Cornish, U.S. Serial No. 09/768,479, filed January 24, 2001;
2. U.S. Patent Application Publication No. 2003-0138785 A1, published July 24, 2003, corresponding to Stephen Kopytek et al., U.S. Serial No. 10/084,388, filed February 25, 2002; and
3. U.S. Patent Application Publication No. 2003-0203471 A1, published October 30, 2003, corresponding to Eric A. Althoff et al., U.S. Serial No. 10/132,039, filed April 24, 2002.

Applicant requests that the Examiner review the references and make them of record in the subject application.

Applicant : Virginia Cornish
Serial No.: 10/705,644
Filed: November 10, 2003
Page 3

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicant's undersigned attorneys invites the Examiner to telephone them at the number provided below.

No fee is deemed necessary in connection with the filing of this Fifth Supplemental Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

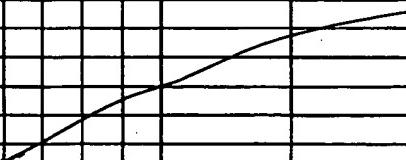
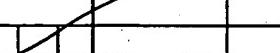
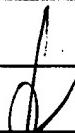
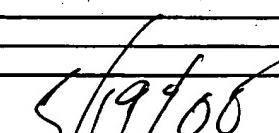
Gary J. Gershik

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:	
Commissioner for Patents	
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Alexandria, VA 22313-1450	
<i>Gary J. Gershik</i>	4/18/06
John P. White	Date
Reg. No. 28,678	
Gary J. Gershik	
Reg. No. 39,992	

John P. White
Registration No. 28,678
Gary J. Gershik
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Attorneys for Applicant
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New York, New York 10036
(212) 278-0400



Page 1 of 1

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office			Atty. Docket No. 63711-A/JPW/GJG/DNS		Serial No. 10/056,874
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)					Applicant: Virginia W. Cornish		
					Filing Date January 24, 2002		Group
U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
							
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	U.S. Patent Application Publication No. 2002-0004202 A1, published January 10, 2002 corresponding to Virginia Cornish, U.S. Serial No. 09/768,479, filed January 24, 2001						
	U.S. Patent Application Publication No. 2003-0138785 A1, published July 24, 2003 corresponding to Stephen Kopytek et al., U.S. Serial No. 10/084,388, filed February 25, 2002						
	U.S. Patent Application Publication No. 2003-0203471 A1, published October 30, 2003 corresponding to Eric A. Althoff et al., U.S. Serial No. 10/132,039, filed April 24, 2002						
EXAMINER		DATE CONSIDERED					

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

JPW/1639



Docket No. 63711-A/JPW/GJG/DNS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Virginia W. Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
For : COVALENT CHEMICAL INDUCERS OF PROTEIN
DIMERIZATION AND THEIR USES IN HIGH
THROUGHPUT BINDING SCREENS

1185 Avenue of the Americas
New York, New York 10036
May 19, 2005

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicant directs the Examiner's attention to the references which are listed on the attached Form PTO-1449 (**Exhibit A**) and are also listed below.

Items 1-3 below were cited in a Supplementary Partial European Search Report issued on April 19, 2005 in connection with the related European Application No. 01942644.4. A copy of the search report is enclosed as **Exhibit B**.

This Fourth Supplemental Information Disclosure Statement is being submitted pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Thus, this

Applicant : Virginia W. Cornish

Serial No.: 10/056,874

Filed: January 24, 2002

Page 2

Fourth Supplemental Information Disclosure Statement should be entered and considered.

1. Cornish, Virginia W. et al., "Dexamethasone-Methotrexate: An Efficient Chemical Inducer Of Protein Dimerization In Vivo," *Abstracts of Papers American Chemical Society*, Vol. 219, No. 1-2, page BIOL 124 (2000) (**Exhibit 1**);
2. Cornish, Virginia W. et al., "Synthesis of Dexamethasone-Methotrexate CIDS With Variable Linkers," *Book of Abstracts, American Chemical Society*, 219th ACS National Meeting, San Francisco, CA, page CHED 401 (March 26-30, 2000) (**Exhibit 2**); and
3. Griffith, E.C. et al. "Yeast Three-Hybrid System for Detecting Ligand-Receptor Interactions," *Methods in Enzymology*, Vol. 328, pp. 89-103 (2000) (**Exhibit 3**).

Applicant requests that the Examiner review the references and make them of record in the subject application.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicant's undersigned attorneys invites the Examiner to telephone them at the number provided below.

No fee is deemed necessary in connection with the filing of this Fourth Supplemental Information Disclosure Statement. However,

Applicant : Virginia W. Cornish
Serial No.: 10/056,874
Filed: January 24, 2002
Page 3

if any fee is required, authorization is hereby given to charge
the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

Gary J. Gershik

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:	
Commissioner for Patents	
P.O. Box 1450	
Alexandria, VA 22313-1450	
<i>Gary J. Gershik 5/19/05</i>	
John P. White	Date
Reg. No. 28,678	
Gary J. Gershik	
Reg. No. 39,992	

John P. White
Registration No. 28,678
Gary J. Gershik
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Attorneys for Applicant
Cooper & Dunham LLP
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(212) 278-0400

Gary J. Gershik

278-0400



Page 1 of 1

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office			Atty. Docket No. 63711-A/JPW/GJG/DNS	Serial No. 10/056,874	
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)					Applicant: Virginia W. Cornish		
					Filing Date January 24, 2002	Group	
U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
<hr/>							
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes
							No
<hr/>							
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>JG</i>		Cornish, Virginia W. et al., "Dexamethasone-Methotrexate: An Efficient Chemical Inducer Of Protein Dimerization In Vivo," Abstracts of Papers American Chemical Society, Vol. 219, No. 1-2, page BIOL 124 (2000)					
<i>J</i>		Cornish, Virginia W. et al., "Synthesis of Dexamethasone-Methotrexate CIDS With Variable Linkers," Book of Abstracts, American Chemical Society, 219 th ACS National Meeting, San Francisco, CA, page CHED 401 (March 26-30, 2000)					
<i>G</i>		Griffith, E.C. et al. "Yeast Three-Hybrid System for Detecting Ligand-Receptor Interactions," Methods in Enzymology, Vol. 328, pp. 89-103 (2000)					
<hr/>							
EXAMINER		DATE CONSIDERED <i>5/14/06</i>					
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							

Applicants: Virginia W. Cornish
 Serial No.: 10/056,874
 Filed: January 24, 2002
 Exhibit A

Applicant : Virginia Cornish
Serial No.: 10/056,874
Filed: January 24, 2002
Page 5

THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In accordance with the duty of disclosure under 37 C.F.R. §1.56 and pursuant to 37 C.F.R. §1.97(b)(3), applicant directs the Examiner's attention to the following documents which are listed on the attached Form PTO-1449 (**Exhibit A**). Copies of the documents listed below as items 1-5 are attached hereto as **Exhibits 1-5**, respectively:

1. PCT International Application No. WO 2003/060073 A3, published November 6, 2003 (**Exhibit 1**);
2. PCT International Application No. WO 2004/042345 A3, published September 23, 2004 (**Exhibit 2**);
3. PCT International Search Report dated October 18, 2002, corresponding to PCT International Application No. PCT/US02/02199 (**Exhibit 3**);
4. Written Opinion dated March 20, 2003, corresponding to PCT International Application No. PCT US02/02199 (**Exhibit 4**); and
5. Pollock et al., (2002) "Dimerizer-regulated gene expression" Current Opinion in Biotechnology 13:459-467 (**Exhibit 5**).

Applicant requests that the Examiner review the references and make them of record in the subject application.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicant's undersigned attorneys invites the Examiner to telephone them at the number

Applicant : Virginia Cornish
Serial No.: 10/056,874
Filed: January 24, 2002
Page 6

provided below.

No fee is deemed necessary in connection with the filing of this Response and Third Supplemental Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

Gary J. Gershik

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Gary J. Gershik 5/3/05
John P. White
Reg. No. 28,678
Gary J. Gershik
Reg. No. 39,992

John P. White
Registration No. 28,678
Gary J. Gershik
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Attorneys for Applicant
Cooper & Dunham LLP
1185 Avenue of the Americas
New York, New York 10036
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MAY 06 2005

Page 1 of 1

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office				Atty. Docket 63711-A/JPW/GJG/DNS	Serial No. 10/056,874
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)						Applicants: Virginia Cornish	
						Filing Date January 24, 2002	Group
U.S. PATENT DOCUMENTS							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
	WO 20 03 06 0 0 7 3	11/6/03	PCT;				Yes
	WO 20 04 04 2 3 4 5	9/23/04	PCT;				No
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	PCT International Search Report dated October 18, 2002, corresponding to PCT International Application No PCT/US02/02199;						
	Written Opinion dated March 20, 2003, corresponding to PCT International Application No. PCT US02/02199 and						
	Pollock et al., (2002) "Dimerizer-regulated gene expression" <u>Current Opinion in Biotechnology</u> 13:459-467.						
EXAMINER		DATE CONSIDERED					

Applicants: Virginia Cornish

Applicants. Virginia C.
Serial No.: 10/056,874

Serial No.: 10/056,874
Filed: January 24, 2002

Exhibit A

1639



Docket No. 63711-A/JPW/GJG/DNS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Virginia Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
For : COVALENT CHEMICAL INDUCERS OF PROTEIN DIMERIZATION AND THEIR USES IN HIGH THROUGHPUT BINDING SCREENS

1185 Avenue of the Americas
New York, New York 10036
November 2, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

This Second Supplemental Information Disclosure Statement is submitted under 37 C.F.R. §1.97(c). Accordingly, the undersigned hereby certifies pursuant to 37 C.F.R. §1.97(e)(1) that each item of information contained in this Supplemental Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Supplemental Information Disclosure Statement.

In accordance with their duty of disclosure under 37 C.F.R.

Applicants: Virginia Cornish

Serial No.: 10/056,874

Filed: January 24, 2002

Page 2

§1.56, applicants would like to direct the Examiner's attention to the following documents which are listed on Form PTO-1449 (**Exhibit A**) and are also listed below:

1. U.S. Patent No. 6,030,785, issued February 29, 2004, Katze et al. (**Exhibit 1**);
2. Dove et al., (1997) "Activation of Prokaryotic Transcription Through Arbitrary Protein-Protein Contacts" Nature 386:627-630 (**Exhibit 2**); and
3. Filman et al., (1982) "Crystal Structures of *Escherichia coli* and *Lactobacillus casei* Dihydrofolate Reductase Refined at 1.7 Å Resolution", The Journal of biological Chemistry 257(22): 13663-13672 (**Exhibit 3**).

Applicants request that the Examiner review the references and make them of record in the subject application.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

Applicants: Virginia Cornish
Serial No.: 10/056,874
Filed: January 24, 2002
Page 3

No fee is deemed necessary in connection with the filing of this Supplemental Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

Gary J. Gershik

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Gary J. Gershik 11/2/04
John P. White Date
Reg. No. 28,678
Gary J. Gershik
Reg. No. 39,992

John P. White
Registration No. 28,678
Gary J. Gershik
Registration No. 39,992
Attorneys for Applicants
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1185 Avenue of the Americas
New York, New York 10036
(212) 278-0400

Cooper & Dunham LLP



Page 1 of 1

Form PTO-1449		U.S. Department of Commerce Patent and Trademark Office				Atty. Docket No. 63711-A/JPW/GJG/DNS	Serial No. 10/056,874
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)						Applicants: Virginia Cornish	
						Filing Date January 24, 2002	Group
U.S. PATENT DOCUMENTS							
Examiner Initials		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
JL	US	6 0 3 0 7 8 5	2/29/04	Katze; et al.			
FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes
							No
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
JL	Dove et al., (1997) "Activation of Prokaryotic Transcription Through Arbitrary Protein-Protein Contacts" <i>Nature</i> 386:627-630 ; and						
JB	Filman et al., (1982) "Crystal Structures of <i>Escherichia coli</i> and <i>Lactobacillus casei</i> Dihydrofolate Reductases Refined at 1.7 Å Resolution", <i>The Journal of biological Chemistry</i> 257(22): 13663-13672.						
EXAMINER		DATE CONSIDERED					
		5/19/06					

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Applicant: Virginia Cornish
Title: COVALENT CHEMICAL INDUCERS OF PROTEIN DIMERIZATION AND THEIR USES IN HIGH THROUGHPUT BINDING SCREENS
U.S. Serial No. 10/056,874
Filed: January 24, 2002
Exhibit A



6390130
Docket No. 0575/63711-A/JPW/GJG/ACK

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Virginia W. Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
For : COVALENT CHEMICAL INDUCERS OF PROTEIN DIMERIZATION AND THEIR USES IN HIGH THROUGHPUT BINDING SCREENS

1185 Avenue of the Americas
New York, New York 10036
October 8, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants would like to direct the Examiner's attention to the following documents listed below and also listed on Form PTO-1449 (**Exhibit A**). A copy of the documents listed below as items 1 and 2 is attached hereto as **Exhibit 1** and **Exhibit 2**.

This Supplemental Information Disclosure Statement is being submitted pursuant to 37 C.F.R. §1.97(b)(3) before the mailing of a first Office Action on the merits. Thus, this Supplemental Information Disclosure Statement should be entered and considered.

1. Amara, J. F. et al.: A versatile synthetic dimerizer for the regulation of protein-protein interactions, *Proc. Natl. Acad. Sci. USA*, Vol. 94, 1997, pages 10618-10623 (**Exhibit 1**);
2. PCT International Search Report dated July 17, 2003 corresponding to PCT International Application No.

Applicants : Virginia W. Cornish
Serial No. : 10/056,874
Filed : January 24, 2002
Page 2

PCT/US02/40943 (Exhibit 2).

Applicants request that the Examiner review the references and make it of record in the subject application.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

No fee is deemed necessary in connection with the filing of this Supplemental Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,

Gary J. Gershik

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Gary J. Gershik 1/28/03
John P. White Date
Reg. No. 28,678
Gary J. Gershik
Reg. No. 39,992

John P. White
Registration No. 28,678
Gary J. Gershik
Registration No. 39,992
Attorneys for Applicants
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1185 Avenue of the Americas
New York, New York 10036
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Form PTO-1449

**U.S. Department of Commerce
Patent and Trademark Office**

Sheet 1 of 1

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